

REMARKS

Claims 1-26 are currently pending in this application. Claims 3-12 and 15-26 have been withdrawn. Reconsideration and allowance of all the rejected claims are respectfully requested in view of the following remarks.

Election/Restriction

The Examiner has acknowledged the Applicant's election with traverse of Group I, Species A readable on claims 1, 2, 13 and 14 filed on January 14, 2009. The Examiner maintains that the traversal argument is not persuasive because Species A through Species J include different geometric shapes and layout and, hence, are considered to be distinct species. The Examiner has withdrawn claims 3-12 and 15-26 from further consideration as being drawn to a non-elected species.

Claim Rejections under 35 U.S.C. § 102(b)

The Examiner has rejected claims 1, 2, 13 and 14 under 35 U.S.C. § 102(b) as allegedly being anticipated by Hisanobu (JP 2003-326756).

Response

With respect to claim 1, Applicant submits that the discharge electrode 1 of JP 2003-326756 (hereinafter "JP '756") is configured such that one side edge of a handle portion includes a plurality of individual comb teeth portions, but is not described as being formed like a rectangular or square flat plate, as recited in claim 1.

More specifically, the discharge electrode of claim 1 according to the present invention is configured such that the entirety of the discharge electrode is formed to be rectangular or square flat plate (see, for example, discharge electrode 6g or 6h in Figures 15 and 16, respectively). In

contrast, the comb-shaped discharge electrode 1 of JP '756 having a handle portion which links a plurality of comb teeth portions therewith is completely different in shape. In other words, claim 1 recites a single discharge electrode (e.g., 6g, 6h) formed like a rectangle or square including a plurality of discharge portions 9 without being divided into a plurality of individual discharge electrode portions shaped like comb teeth. By disposing a plurality of heat-generating bodies 5b in one discharge electrode 6g, discharge can be generated from a plurality of discharge portions 9 without forming the discharge electrode 6g to be comb-shaped as with the discharge electrode 1 of JP '756.

Since discharge electrode of the present invention is easy to form and a position of the discharge portions 9 is determined at a position of the heat-generating body 5b, minute positional matching between the discharge electrode and the heat-generating body 5b is not required, and excellent productivity can be secured. Furthermore, since an area of the common electrode portions 7 can be increased, the entirety of the discharge electrode 6g can be quickly cooled by enlarging a radiating area, responsiveness of discharge generation to the turning ON and OFF of the heat-generating body 5b is increased, and it is possible to improve recording speed.

Dependent claims 13 and 14 are patentable for the reasons given above with respect to claim 1, as well as based on the separately patentable method for controlling discharge of the discharge control unit according to claim 1.

With respect to claim 2, the discharge electrode 1 of JP '756 does not have a common electrode portion that is wider than the width of the individual discharge electrode portions. Rather, the common electrode portion and the individual electrode portions have the same width based on Figure 1. Regarding JP '756, where the width of the common electrode portion is

insufficient as compared to the width of the individual discharge electrode portions, the cooling effect of the individual discharge electrode portions that is temporarily heated to 200 °C to 300 °C is insufficient, and it is impossible to prevent heat from being confined, quick response to the turning OFF of the heating becomes difficult, and the interval of discharge time is lengthened to decrease the recording speed, such that practicality and reliability are insufficient.

Further, where the width of the common electrode portion is narrow and the area thereof is inadequate, the potential difference between the respective individual discharge electrode portions connected to each other by the common electrode portion is easily brought about, unevenness in the discharge amount in the respective individual discharge electrode portions is generated, and stability of discharge generation is insufficient.

In contradistinction, in claim 2 of the present invention, the discharge electrode is provided with a plurality of individual discharge electrode portions and a common electrode portion, formed to be wider than the width of the individual discharge electrode portions, for connecting one-sided ends of the plurality of individual discharge electrode portions. Accordingly, discharge is carried out from the discharge portions of the discharge electrodes selectively heated by the heat-generating body, wherein the cooling effect of the individual discharge electrode portions is improved and it is possible to prevent heat from being confined. Therefore, discharge can be quickly stopped in response to the turning OFF of the heating, the interval of discharge time can be shortened, and presence or absence of discharge can be changed over in a short time, such that responsiveness is excellent. Still further, it is possible to lower the resistance value of the common electrode portion, and the potential difference brought about between respective individual discharge electrode portions connected to each other by the

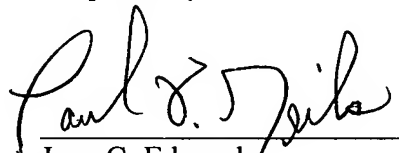
common electrode portion can be suppressed as much as possible. Therefore, claim 2 of the present invention realizes excellent functions and effects that unevenness in the discharge amount in the respective individual discharge electrode portions can be reduced, stability of discharge can be improved, and practical use and reliability are excellent.

With respect to withdrawn claims 15-19, the above arguments apply equally to these claims, and Applicant respectfully requests that they be rejoined and allowed by the Examiner.

If the Examiner believes that there is any issue which could be resolved by a telephone or personal interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number listed below.

Applicant hereby petitions for any extension of time that may be required to maintain the pendency of this case, and any required fee for such an extension is to be charged to Deposit Account No. 50-0951.

Respectfully submitted,



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